would get up and pantomime different people and Prof, the way he paced, used to stick his thumbs in his pockets and wave his fingers back and forth. He had certain characteristics that were pretty easily recognizable and they would go through pantomimes and stuff like that. So that was good. Well, I decided that if I was going to be the only American, I'd better learn Hungarian, so I got a book on Hungarian and started trying to work on it, but then they hired Dick Steele and now with two Americans, they had to switch to English and so now the parties were in English.

AK: Of course, he spoke English . . .

DP: Oh yeah, they all spoke English real well, it's just that when they got together, even their friends were Hungarian and so it was easier to do it in Hungarian. Never gave it a thought.

AK: But I suppose when more and more non-Hungarian speaking people came, he then had to decide what people were going to call him.

DP: Yes. I'm . . .

AK: I'm Prof and this is Profne.

DP: Because I can remember him explaining to me that I wouldn't be able to pronounce his name.

AK: So tell me again about the wives policy.

DP: Well, the reason for hiring the wives and having them have the proper job, he said that they should never have the wife work for the husband, but have the wife work for somebody else and so he had his wife work for Csuli Szent-Györgyi and Csuli Szent-Györgyi 's wife worked for him. So that this he felt was the proper mental and political switch, so that people would not criticize, or if any little things happened it could be blown into mountains out of molehills. It worked out really very well. When I came to NASA, the Director of Life Sciences had a wife who got cancer and was operated on successfully, but was told "You've got to occupy your mind. Go back to school and get your Master's Degree, and why not get it in electron microscopy because you'll have access to that?"

So she came down, wanted to know if she could do it, and I said, "Wonderful." Taught her electron microscopy and she was so good at it that I said, "From my experience in Woods Hole, I think it would be great if you came here and you worked on projects for the director, who's having some electron microscopy done, because then at night, when you're having supper, you can discuss what you want to get done. It will be much more productive," and I said.

But the way to do it, knowing from what I had learned in Woods Hole, was that she should not work for her husband. She should work for me, and that she should observe the rules that Szent-Györgyi had set up for the wives and that was that they were to be treated

exactly the same as anybody else in the lab, so that everybody in the lab would know that they're not getting special treatment and to be told that if you make a mistake, you will get yelled at exactly the same as anybody else, and the director's wife told me, "Yes, thank you. That's exactly what I want. You now made me feel welcome."

AK: A wise policy.

DP: Yes, it was. It was amazing the amount of spin offs and things that I got from working for him.

AK: Now, as you and I are sitting here at your table in Sunnyvale, to my right is a . . .

DP: Microtome.

AK: Piece of technology there, a microtome. Could you tell me about that and how that fits into your work at Woods Hole?

DP: This is an integral part of Prof and Del Philpott. When I went to the institute, I immediately showed Prof some drawings I had and I said that I had worked on the development of an ultra microtome and worked out all of the parameters that needed to be done to build one, and this is my drawing. But I said, "They did not allow me to build it in the last place and we have to have an ultra microtome in order to do the work that we're doing." I was

prepared for a half hour talk on it but, with his great brain, he didn't need anything except the proper reason.

He said, "Okay, I got a machinist in Connecticut. Build it," and he built it for four hundred dollars, which was great, and when he called me up and told me he had it done, I grabbed an airplane, because I had a commercial license. I could get an airplane pretty easy and rent it, fly it. Flew to Connecticut to get it, because I was so anxious to get it and get it back, and then the guy kept saying, "Well, this is how it works. This is"—and I said, "I designed it. I know how it works." "No, no, no, no, I can't let it go. I'm so proud of this. I got to tell you. I got to tell you."

Finally, to shut him up I offered him a ride in the airplane. He took that. We put it in the back of the airplane and I gave him a ride, came back and dumped him off. Flew back, got back, at about, oh, twelve o'clock, a little after, and the Hungarians always ate lunch late, so by the time I got back and could set it up, they had gone to lunch. I remember thinking to myself, "Thank God, because if doesn't work, I'll have time to think of some excuses." Well, I turned it on and it worked. Then I was mad! Why were they at lunch? Why couldn't they come here? Why couldn't I show it to them?

Well, then the next thing I found out, and here's where Prof really put his brilliant brain together again. I found out that since my lab faced south and it was a thermal advance microtome, that when the sun came in and shone on the microtome, it would start moving it

and it would start cutting, and if I didn't pull the shade down part way, it would not only not cut thin, but then it would start cutting thicker and thicker and thicker. So I said to myself, "Hey! I can use the window shade to run my microtome." So I took a piece of paper, marked it off in angstroms and then put it up beside of it, watched the colors and stuff for the amount of sunlight that was coming on it, and I calibrated my microtome with the window shade.

Then Prof came in and said, "Well, how are things going?" I said, "Have I got something to show you. Watch this. Look through the binocs and I'll call off the colors that you see as the sunlight is shining on that microtome." He looked at it. He looked up and he says, "Perfect, when I was in Budapest, a prince was where we got our money to do our research. Now, we had to cobble everything together, and in order to do that, we had a lot of pieces hung up to the next one, to the next one, to the next one, and so there was a lot of things that had to be exactly right on each little piece or it would burn out. Well, since there was so many things to remember, we had a wire recorder—didn't have tape recorders then—and the requirement to be an officer in the Hungarian Army is to be able to swear for twenty minutes without repeating yourself, and then you can be an officer in the Hungarian Army."

And he said, "We got somebody who could swear for twenty minutes and put him on the wire recorder. That was hitched up to it, so if it was not turned on properly, the wire recorder would come on and start swearing away at you, and keep swearing until you got it correct. Well, word went out that we had this thing working that way. The next time the

prince came, he walked in and instead of wanting to look at a test tube that had a precipitate and an explanation and everything else, we said, 'What can we show you?' and he says, 'Turn the equipment on incorrectly, I want to hear the wire recorder.'" So he said, "We turned it on incorrectly, it started swearing away like mad, and we kind of cringed and he's there with a big smile and finally he says, 'Okay, you can turn it off.' We turned it of, he says, 'You boys know exactly what you're doing. You got your money,' and walked off."

So he says, "That window shade is the same as that wire recorder. From now on when a site visit man comes, I'm calling you on the phone. I'm going to find out what time the sun comes in. That's when I will bring him by your lab. You'll be all set and we'll cut sections with a window shade," and sure enough, the next site visit guy that came, came in. I had it all set and I said, "Here, I want to show you how we run our ultra microtome."

So I start running the window shade up and saying, "Okay, is it cutting?" "Yeah, it's cutting." "Gee, gee. Hey, let me run the window shade." [laughs] So that's what we were doing, we were working it with the window shade. We got through. It was the first time I ever had a site visit they didn't want to know anything about the science I was doing. "Boy, that's great. You really know what you're doing," and off they went. So from then on, we cut sections with the window shade and it was beautiful. We got our money.

AK: Now, that was a serendipitous finding.

DP: Oh, yeah.

AK: How would you have cut them, without the sun?

DP: Oh, it's a thermal advance. See where the two wires are there?

AK: Yes.

DP: I had a Variac and the Variac just fed current from a 110 plug.

AK: But the shade worked better?

DP: Well, it worked the same. It wouldn't work better, but it worked the same as with the Variac. Then obviously you couldn't wait for the sun to do your sectioning. A lot of times you didn't have the sun.

AK: But it was kind of neat.

DP: Of course you had to have the other, but I don't think after the word went around on that, I don't think anybody ever came to the lab that didn't want to play with the window shade there. I had that big strip, you know, angstroms, running up. [laughs] It still works.

AK: It's an example of the kind of creative thinking, looking at things—what did Szent-Györgyi always say, discovery is seeing what everybody else sees, but thinking what nobody else has thought.

DP: That's right. When I left, he said, "You've got to take that microtome with you." He says, "We've had so much fun with it. They'll just throw it out here. You've got to take it with you."

AK: This was an invention of yours.

DP: Yeah.

AK: What year was that, did you do that?

DP: When I first went there. That was almost the very first thing I did because we had to have that. When I worked out the principles for doing ultra thin sectioning, I realized that I could take a Spencer 820 microtome—you're probably familiar with one of those. It's a very heavy piece of equipment for cutting light microscope sections in paraffin. The thing just goes up and down, and that's it and it rubs when it comes up, obviously, but it doesn't matter. It's cutting them so thick, it makes no difference. But with that, you don't dare go by and put an electric charge on it, and maybe rough the surface up a little bit. You've gotta miss, and so I reasoned that I would not have to modify the Spencer 820 microtome at all.

All I needed was a tongue depressor with a notch cut in it, and what I did was I put the plastic block that we wanted it in—and you had to have a really highly polished knife. You had to have a good edge.

That was another problem. You had a really good edge, and then run it up and down until it cut, and then until it wouldn't cut anymore because it was just up and down. Then I'd push a little bit with the tongue depressor, push a little bit with the tongue depressor so that it cut enough so that it's now going to miss when it comes up. Now, all you have to do is get just the amount of pressure on it, and you can cut an ultra thin section. I actually published it. I've forgotten where it went. Nobody wanted to do it that way.

AK: But it worked.

DP: But it worked. That's how I got my first ultra thin sections, with a tongue depressor and I remember showing it to somebody and they said, "You should publish that."

AK: Now, we've talked a lot about the pleasure, the sense of humor, the sense of joy and discovery. Did you ever see Szent-Györgyi frustrated in his work? Upset?

DP: I don't think I ever did. Of course, I wasn't up there, like Jane [McLaughlin] was with him all the time, but it seemed like he always had some idea he was trying, and he worked on books, published some books. I remember one of at least, and there was another book that

was published where somebody had a drawing of the MBL and they had Prof and just a pen like drawing, you know, where his Institute was. Then they had Del and pointed at the spot in MBL where I was. But I don't remember him ever being that way.

One time, Prof was going to give a Friday night lecture at the MBL. I think he gave at least one every summer and some people came by my lab and they said, "Boy, we were really laying for him. We've looked over all his work and his theory of muscle contraction, we've got some good holes in it and boy we're really going to clobber him tonight." They were bragging to me, knowing I guess that I work for him and I better be there so I could seen him get his comeuppance.

So I went to Szent-Györgyi and said, "Hey, so and so has been in the lab and they're bragging about that and I thought you ought to know about it." He said, "Oh, okay." He seemed nonplussed about it, so I thought, "Well, I guess it was okay to tell him." What he did was come up with a completely new theory of muscle contraction. He did not talk about what they expected at all, and they sat there and never said a word because what they had the ammunition for wasn't any good. I walked away saying, "Geez, no wonder the guy got a Nobel Prize. He's brilliant."

AK: Uh-huh. There must have been a real change then between summer and—what would you call it? The off season? The winter? Was there a name for that period, the nine months of the year?

DP: Well, of course, he worked in his lab year round.

AK: Year round, right.

DP: So there was no change for him, and then for me, of course, I went immediately to the people who were coming in. I had to schedule them, figure out what they were doing, how best we could approach what they were doing, what we could look for, how we could fix things, how we could cut things and do things like that. So by the time summer was over, I was pretty close to an emaciated wreck, and I took my vacation then and then came back ready to dive in and get the work done.

I got pretty well known for stuff I was doing. I was starting to get offers to give lectures at different places. One time I guess I'd had several in a row and I went up to Prof again and told him I had an offer, and I could tell he was a little upset I was going to be gone so much, and I thought, "Oh-oh, I better be a little bit careful how many of these I accept." So then I kind of paced myself, you know, how many times I went off and gave lectures.

AK: Well, now, you mentioned earlier in our interview about his support for your Ph.D. work at Boston University.

DP: Yeah.

AK: And that he really wanted to make sure that you could do that.

DP: When I first went with him, I told him I didn't have a Ph.D. and I wanted to be sure that I wasn't there under false pretenses.

AK: Right.

DP: And he said, "If it works out between us, I'll help you get it." See, and then ten years later—well, I had I think 48 or 49 publications and when I realized the number I had, I thought, "Gee, if I quickly write one more and send it in, then when I have my application, I can put down 50," because when I was a student before, one student had one publication and the teacher kept bringing it up all the time and it kind of bothered me after a while. If they want to bring mine up, they can bring up fifty this next time around. Anyway, when ten years had gone by and we'd had a wonderful time, like I say, I don't have to worry about where I go when I die, because I had my heaven on earth for ten years, and that's as much as anybody can expect.

He came in my lab and says, "Well, I'm only one person and I only have a small institute, working mostly on cancer now. You're a lot younger. You have a future ahead of you and the Ph.D. doesn't mean a thing to me. It never has, and we both know it didn't, but out in the cold world it will." So he says, "I think this is the right time for you to get your Ph.D."

AK: He approached you?

DP: Uh-hmm.

AK: Did he know that you might want to do it, or did he just come up with it?

DP: He only knew that I didn't have it and that I had told him . . .

AK: When you first started.

DP: When I first started, but he also knew the cold world and knew what I would face without it. The limitations on advancement and the impossibility of ever having a lab group and directing it myself without it.

AK: So he actually helped initiate your . . .

DP: Oh, yes, yes. He told me that I should do it.

AK: Okay.

DP: And he was absolutely right.

AK: Yeah. Then you did it.

DP: Oh, yeah.

AK: You got your Ph.D. in '63.

DP: Oh, yeah. Well, I of course announced that I was looking for a place to go and because in the ten years I had been there, I had never used German–even though I was pretty fluent in German–or French once in my scientific work, I felt that the requirement to have those two languages was the dumbest thing that anybody could ever make a guy waste his time for. So to go back after ten years is going to be harder, and I didn't want to go back to a school where the Language Department gave the exam because then I would have to kill myself learning the languages, and maybe after ten years they wouldn't even allow credit for my German that I had passed at the University of Indiana.

AK: Some people might forget now, because requirements have changed, that up until fairly recently, you needed to be scientifically proficient in two or three different languages to get a doctorate.

DP: Pretty stupid. They have all the international meetings and stuff in English. It was crazy. I had oodles of offers pouring in, wanting me to come and do electron microscopy and set up an electron microscopy lab for the universities, but the Language Department would give

the exams, and I didn't want to kill myself doing that. One of them called up and said, "Well, we can cut it to one for you and then we'll have a math exam for you to take. Would that be okay?" [laughs]

I got all kinds of offers like that, but Boston University, the department itself gave the exam, so now you knew you didn't have to kill yourself, and they agreed that the summer before I went up there, because I still ran the electron mic that summer in Woods Hole, that I could take the German exam in the summer, so I wouldn't even have that one to worry about. Once I started, I'd only have the French, and that was an easy French thing. It wasn't much, and they flunked me the first time just so it looked good on paper, I guess. I didn't do as well the second as the first, and got passed. But anyway, that took care of that.

Then there was one more twist to it. The assistant chairman of biology was supposed to take over the electron mic lab—see, I put in for a grant, got the biggest grant they'd ever had, eighty thousand, bought a German electron microscope, got Jack Kennedy, who later became President, to take the eight thousand dollars tax off the microscope because it was for a school in Massachusetts, which he was representing at the time. Bought a second used RCA and set them up with a nice teaching set up that they could have, but the assistant chairman who was supposed to take over never came up once to see how the thing was run and who was supposed to run it.

So later I found out that for my Ph.D. orals, when I told them that so and so was on my Ph.D. orals, and that I knew the guy and that I thought it would be fun to have him as one of the people, he had planned to flunk me, so I'd have to stay another year and take care of it for him. Since that guy was a friend, he wouldn't be able to get him to flunk me, so he ran and he got Metalsky, who I never heard of, and put him on with only a couple days to go. So I ran like mad to Metalsky, carried my thesis over and said, "I'm sorry that they put you on so late, but here it is. I hope you have time to look at it because I'd really like to have you understand what I've tried to do here for my Ph.D. thesis," and he says, "Oh," he says, "in a couple days I'll call you doctor." So that made me feel a little better.

Well, I passed because it took two to flunk me. Pat voted against me, but it was only one, so that didn't flunk me. I immediately went down to Woods Hole to tell Prof that I had passed, and I walked in and he had a smile on his face and before I could open my mouth, he says, "Well, I hear you passed." "You hear I passed? How did you hear?" He said, "Metalsky called me up." "Metalsky?" "Yes, he was a student of mine in Budapest."

AK: You had not known that?

DP: I did not know it. [laughing] It was like taking off a friend and putting an uncle on my board.

AK: Wow.

DP: So that was sort of a last little sweet touch, you know, that went into it.

AK: Very nice.

DP: It was great.

AK: He never told you that until you passed.

DP: The minute that Metalsky had been put on the oral exam committee. He called Prof and says, "I'm on your man's Ph.D. thesis," and so Prof knew he was already on it.

AK: He knew he was on it, but he didn't tell you that . . .

DP: Well, I wasn't back in Woods Hole.

AK: Yeah, you weren't there.

DP: I was up at BU sweating it out. It came back. Isn't that a neat little touch?

AK: My goodness. Quite a story.

DP: That's great.

AK: You know, I imagine that on the one hand, it was part of his honesty, part of his charm, part of his idealism, part of the white, when you talk about white versus black, part of the white part of the goodness of Szent-Györgyi that he had this kind of 'money's not as important as other things.' On the other hand, in a way, it also gave him some trouble, that he didn't seem to understand the fund granting, or he did understand the fund granting process, and just didn't want to play.

DP: He hated it.

AK: He hated it.

DP: Yes—two things. One, the insurance company published that they would give ten thousand dollars to several people to do research and one of the conversations we would often have is that how the hell can we write proposals saying what we're going to discover, when we don't know what we're going to discover? How can we do it? He said, "Almost everybody who has to do research, finds something but doesn't say it. Write the proposal that that's what they're going to discover and have this lag time built in, in order to keep going with their granting stuff." So he says, "I've seen this ad for ten thousand dollars and I have written them a letter saying 'I offer you my services to spend ten thousand dollars of your money on biochemical research,' signed Dr. Albert Szent-Györgyi , Nobel Prize Winner, and I mailed it to them. I did not tell them what I was going to do, and I think I'll get a letter from them." This was at tea.

A week later he comes in and whenever he wanted the floor, he always did this, he put a finger up and we were all quiet to listen. "I heard from them." "Yes?" He said, "They called up and said, 'We got your letter, but we don't understand it.'" So he says, "I went ahead and I explained it to them. When a baby is born, it can be a Hitler or an Einstein, there's no way of knowing, and that is what people ask you to say when you write a grant, is it going to be a Hitler or an Einstein, and there's no way you can say it." So he said, "I went ahead and I explained the whole thing to them and they said, 'Hmmm, okay, you got your ten thousand.'" [laughs]

Now, let me tell you something else that I think is a real key to Prof. I asked him about his discovering vitamin C because, gee, here's this one chance in ten billion other people that can ask him. He says, "Oh," he says, "that's really interesting." He said, "I had isolated only enough ascorbic acid to be pretty sure of what I had, but I had to have some more and I was trying and trying to find stuff that would have enough in it. I came home for supper and my wife had cooked peppers. I hate peppers, and I didn't want to eat them. Hmmm, how can I get out of this?" So he said, "You know, I haven't tried peppers yet. Ya, I got to try these."

So he said, "I quickly grabbed up everything, and then I said to my wife, 'Well, did you cook anymore?' because I figured if she had some waiting, she'd bring a second bowl," and she said, "Well, yes, I did." So he said, "Oh, oh, we got to put these in the pot, too." So he put them in there and then his brilliant mind worked and said, maybe there's some raw ones

in the refrigerator, see. So he said, "Do you have any more in the refrigerator?" She said, "Well, yes I do." "Oh, I'll take those," so he had everything she had. Now, his plan he said was to go to the lab, throw them out and just go ahead with his work, but here's the key to Prof. When he got there and thought about throwing it out, he's so honest, that he said to himself, "You know, I can't go home tonight and tell her I threw it out. If she asks me, I have to be honest and I have to tell her. I can't tell her that. I'll have to run it," and he says he ran it, and there it was, "I had my vitamin C."

AK: That's a great story.

DP: And that I think illustrates Prof a lot, about how honest he is. The only troubles I ever saw him get into was because he was totally honest.

AK: Now, as he was encouraging you to get your Ph.D., I almost have the idea that he's thinking ahead for you.

DP: Uh-hmm. Because he said, "It's only a small institute. You're a lot younger than I am."

AK: So he was expecting that you were going to leave, or anticipating that you would leave, or maybe that he would not outlast you.

DP: Well, there's two things he was expecting. Everybody expects to live forever, but he's a lot older. He's off on cancer, so his directions have changed some. He doesn't need electron microscopy as much.

AK: I see.

DP: And the life of the Institute is not going to be the life of my professional career. So all these were factors in his mind.

AK: Tell me a bit, then, about your decision to leave. You did go to the University of Colorado Medical School, was it?

DP: Yeah. The decision had a couple steps in it. I felt that the electron microscope, the ultra centrifuge that had just been put in, both needed to be running through the nine months in the winter in order to be runable when summer came. They would be a basket case by the time summer came, sitting in Woods Hole and all that moisture and all that stuff and not run. And then there was the need to have professional operators on both of them. They should hire somebody for the ultra centrifuge, and they should have somebody for the electron microscope. Unfortunately, a lot of the old diehards that had come there every summer through their career at their universities, had their pet lab they came to for three months.

So they allowed the MBL to be shut down for nine months, this big operation dead for nine months until Prof came and this area around just him for quite a while. So I said that this really should be done, since everything was working great and so on. That what I should do is get a grant, and with the grant, I could work on my grant the nine months in the winter, and I could run it for them in the summer. Now, the Director of the MBL at the time, the one that I had to take the tie off for, I've got to get him back into this thing. I got a hold of one of the granting agencies, somebody I knew. You get to know pretty well all around, NSF I believe it was, and told them what I wanted to do and so on. They said, "Oh, fine."

They were all for it, so it looked like it was going to be an approved grant. Wrote it, gave it to MBL to type and the Director said, "Well, you didn't put in rent," and I said, "The granting agency doesn't allow rent." I don't know if they do now or not, but they didn't then. And I said, "They won't approve it if you put rent in it," and he said, "I'll rewrite it so they can't tell it's in there." I said, "Well, I don't think they'll be that stupid. You know, I think they'll be able to figure it out, no matter how you rewrite it and put the stuff in the budget with it." "No, no, that's the only way it's going to be done." So he did and they rejected it, so I couldn't get my grant and I had to leave. So that's why I left Woods Hole. Now, I've never been real sure—I think that the rule was correct, and that it had to be done, but I'm not dead sure. There's always little devil with a pitchfork inside of you saying that the Director got even with me.

AK: For having to admit you to the reception without a tie.

DP: Well, to have to accept me. I hope I'm wrong. That part of me is not a Szent-Györgyi , I guess.

AK: So you . . .

DP: But they fired the Director shortly after that, and like I say, sometimes there's moments that are kind of nice. He met me on the bridge by Captain Kidd's after he was fired, cried on my shoulder about why he got fired, and I thought, "I'm enjoying this moment." [laughs]

AK: But you then needed to go find . . .

DP: Yeah. See, so then I looked around and I could have gone with Csuli and Shinya Inoue up to Dartmouth. They wanted me to come up there and be with them, and I said, "Well, geez, I really think I should be out on my own." It was a terrible decision, whether to go up with them or on my own. I got the offer to go to the Department of Biochemistry in Denver, Colorado, so I went there, which turned out to be the wrong thing to do. And I had lots of offers that would have been pretty good.

One of them was in Canada—I'll say Quebec, I'm not sure. Maybe Montreal. Can't remember now. The Histology chairman was interviewing me and there was a book laying on his desk, and while he was interviewing me and talking to me about the position, he asked me about electro microscopy and I said, "Well, do you want to see a photograph of

mine? Look at the cover of your book." He looked at it, paged in there, "photographed by" me. Picked up the lab manual, picture on the cover by me. [laughs] He turned to me and said, "Well, hmm, I suppose if you want the job."

AK: Tell me about leaving Woods Hole. You had been there a long time.

DP: Well, ten and then the three, so thirteen years. Well, I left by myself. I had been married all the while, but let's say that there was an—of course, you go to school, you don't spend as much time with your wife or there at Woods Hole with her. And an Air Force navigator turned out to be a better navigator than just navigating an airplane. Without going into details, that was the end of the marriage. I had the airplane and so I figured, well, it would be tough for her for a while and I hadn't paid an awful lot for the house. I gave her the house and the car. I sold my airplane and bought a car and went to Colorado.

AK: You said goodbye, of course, to Szent-Györgyi .

DP: Oh, yeah.

AK: Tell me about that. He was generally supportive of your leaving?

DP: Oh, yeah. He was very supportive of that, because like I say, he had gone into cancer work. Rather than really working with him, I worked with Csuli, see, and then Csuli left. So a lot of the people in the Institute had left and he was pretty much down to just his lab.

AK: Tell me about your contacts with Szent-Györgyi and Woods Hole after you left, because you maintained a relationship with him.

DP: Oh, I can tell you one really good one. When I came to [NASA] Ames Research Center, they had a package like this and were kind of running from office to office. They said, "Well, I'm busy. Why don't you just take the package and go to the next building and take it to room such and such," and I thought "Well, there's no reason why I can't take a look." I took a look. There was a blank piece of paper on the top of everything and it said, "This man was unconditionally recommended by a Nobel Prize winner."

AK: Wow.

DP: I said, "The rest of that's junk." [laughs]

AK: Somebody had written that on there?

DP: Yeah.

AK: That's quite a compliment.

DP: I thought so, too.

AK: And a nice thing for him to do.

DP: Oh, yeah. We always had a rapport that was excellent, and I remember telling Csuli one time, I said, "Geez, Csuli," I says, "it's so hard for me when I interact with Prof to realize he's the boss. He's like an uncle." I said, "It's really hard." He says, "Yes, but please always remember it." So I always tried to, so I wouldn't be smarting off or anything like that.

AK: Now, did you go back to Woods Hole from time to time?

DP: Well, the arrangement in Denver, and I made this as part of an arrangement any place I was going to go, that I could go back in the summer. I had so many friends that I had published and worked with that having a little space in a lab was slam-dunk, you know. There was nothing to that. So the first year in the Department of Biochemistry I made all the arrangements for going back. I was all set. I think I was like two weeks from it or something for leaving for the summer and the chairman told me I couldn't go. He wouldn't let me go.

I was back in the black world. When I got there, I'd been told that I would be paid for my moving and when I got there, he said, "Well, you really can't do that, but if you tear the stamps off of everything you sent me, I'll reimburse you for the stamps." Now that was my clue that I'd made a mistake. Then everybody else that came—I remember another person came in that he hired and was actually crying in my office and he'd only been there two weeks, because of the way he got treated after he got there. I said, "Have you burned all your bridges?" and he says, "Well, maybe not." I said, "You got a bridge you can get on, get on it. Get the hell out of here."

AK: But you did maintain touch, though, with Szent-Györgyi ? You did go back to Woods Hole from time to time?

DP: Well, I would go back and visit him.

AK: But you didn't spend any extended research periods?

DP: No, none. I was onto doing different things.

AK: You mentioned some photos that you had taken around his 90th birthday.

DP: Oh, yeah. See, he had an 80th and a 90th, and like I say, I was really flattered to find out that on the first list of five, I was on there for being invited.

AK: And also to take the pictures.

DP: Oh, yeah, and to bring a camera. He would buy me or give me enough money for some flashbulbs and a couple rolls of film before each party, and what I did—see, we'd have the party on Saturday night and on Sunday I would go in and develop the film. Then on Monday morning, I'd come in early and I'd print and I would print everything up on 8 X 10's, because I knew we'd have tea at four to four-thirty and that's the ideal time because that's what you're going to talk about, the party, see? So I would come up, pass the pictures out. Then people could all go around and look at the pictures, and then they were for Prof to take home with him.

AK: How did you hear of his death?

DP: Gosh, he had kidney failure and they offered to put him on dialysis, and as it was explained to me—it was somebody from Woods Hole that called. You know, mentally I was more on him and what had happened than who was calling, but he refused with the statement that it would only prolong things and that it in the long run it wouldn't be worth it. Like I say, his mind went for the most correct—not the only, but the most correct—answer that one could come up with. I was always amazed at how fast he would do it.

AK: Yes.

DP: One time there was a local city problem and they were going to have a town meeting, and the town physician was there. He worked on schistosomiasis and I took pictures for him. The physician turned to Prof and says, "What do you think we should do?" and Prof immediately said, "You have to make a big noise right away, or forget it," and that was it in a nutshell. You stand up and fight for it, but you don't sit around and whimper about it. That's another sort of clue to how he thought.

AK: I would like it if you could take a look now at some of the points that you had prepared and to see if we have covered everything.

DP: We should have covered a lot.

AK: Because I want to make sure that we get to the things that you wanted to mention.

DP: Okay. New Year's celebrations I don't think we covered.

AK: We didn't.

DP: New Year's for the Hungarians was very important, and the one thing they did that was different than any place I've ever been in, they had a tub of water and they melted lead in a crucible for holding lead, and they cast the lead into the water. Of course, it has a period of going through some air and then into the water and then hardening. When it hardened, they

had somebody that was pretty good at making up fortunes, and they would get this out and have the light either cast a shadow or find the right angle to look at it, and then they would tell your fortune for the coming year.

AK: Oh, that's nice.

DP: That was really neat in the way that we did it. Oh, here's something we didn't do. A site visit was in progress up on the third floor, where you could look out on the ocean, and because of the beautiful view the site visit—I don't know if it was one or two people—were looking out. When they looked back, Prof and Csuli were gone. I mean, just like that, they weren't there. So they walked around, "Where did they go? Where did they go?" They came back to the window and looked out the window and Prof and Csuli were fishing. They were actually fishing out in front. He said, "Geez, I don't believe this." Pretty quick they're back in with their poles, put their poles away and Prof says, "You'll have to forgive me. You'll have to forgive me, but," he says, "Csuli came in and said the Blues were running. Bluefish. He says, "They're running," and he says, "you know, they go right through. If I would have explained to you that I wanted to go out and fish for it, they'd have been gone. So I'm sure that you understand that we had to run out and take advantage of it, and now we're back." [laughs] The guy says, "You're right. I would have done it, too." [laughs] But again, you get a little clue to how he did things.

Oh, here's something else. When we had our parties, he believed if you played games, it meant a lot more if you bet money, but it was wrong to bet large sums of money and it didn't matter how much money you bet. If you had money involved the amount never matters. So he kept a cigar box full of pennies and when we had the games, he got this cigar box out with these pennies. So we all got our supply of pennies and we bet pennies with it. So that's how we would do the games.

He often played chess with people and he was very good at it. So he would smile and tell me that "I'm going to get my lawn mowed Saturday. I have a game of chess with so and so. He's coming out to play chess with me. I'll get my lawn mowed." I said, "Well, how's that?" He said, "Well," he said, "I look, I move, and then I tell him, 'When you're ready and have made your move, come and get me,' and I go out and I mow and I mow and I mow, and finally they come and get me. I go in, take a look, I make a move and I say, 'Okay, when it's time, you come out and get me." I mow and I mow and I mow." He said, "I always get it mowed by the time we're done playing chess." [laughs]

We had a Dutch fellow hired that was a mathematician and had calculated that the unit membrane in the two little black lines were not wide enough. Biochemically they had to be wider than what we could see in the electron microscope and that was one of his jobs. Obviously, this guy's Dutch, he's good at chess. He says, "I just got here. Prof invited me to come up and play chess. Can you tell me anything about being with Prof?" and I said, "Well, Csuli always said 'Don't forget he's the boss,'" and I said, "You're probably pretty

good at chess, so maybe to start with, would be better if you don't beat him." And, "Oh, okay." That was just casual conversation. Monday morning he comes in with a huge smile on his face and he said, "I want to thank you. I want to thank you," and I said, "What for?" He said, "Well, I got to playing and I got really involved. Suddenly I realized I was winning." He said, "I had a terrible time losing, but I lost! I lost!" [laughter]

Another thing—when the pharmaceutical companies got the idea that Vitamin C would cure a common cold, they overdid it in terms of advertising and Prof wrote to them and told them that you cannot do that. It's not a cure for the common cold. Now, after they got his letter, advertisements by them came out again. That was the only legal thing that they had to stand on in terms of suing them. Before that, I guess legally you couldn't until you warned them, but he warned them and they did it anyway.

So they made a financial settlement with him, and it's all him and stuff he's done before he'd even come to Woods Hole, but he gave each one of us four hundred dollars because he said, "You're part of the Institute. You're part of what's going on. You've got to be part of what comes in," and he gave us each four hundred dollars. You know, like I say, I lived in the world of white. Of course, you've heard the story about how he gets up and lectures and always says he fishes with a big hook.

AK: Yes, he'd rather not catch the big fish than not catch the little fish.

DP: He wants to catch the big one. Did I show you the picture . . .

AK: No.

DP: Since I was doing a lot of photography all the while, I got the idea that since I had watched Prof stand up and lecture and point at pictures on the screen, and point at places in muscle where things biochemically were going on, that it would be nice to have a picture of him there pointing. So we put the picture together and there was a book that was going to be published. [George] Gamow, who was the father of the big bang, also had showed us how to pile books off a table so the top one was further off and wouldn't fall; of course if there was enough weight if you had three books it won't fall. And that's in the book, too.

So I put it together and since I had the magnification of the muscle on the picture, we then calculated it for a six foot person, and measured the length on the picture, and we put the linear shrinkage of Prof on there. I of course showed it to him to make sure it's okay, and he was extremely proud of the picture, because, "The only time in public I've been linearly shrunk." So he went around very happy and bragging about the picture and I gave him a number of copies that he could do something with, if he wanted to.

AK: A copy of that you've given to me.

DP: Yeah, so that you can have it.

AK: We've covered what I planned to cover with you, but is there anything else, any anecdote or anything you would like to say about Albert Szent-Györgyi as we conclude this very interesting review of your experiences with him during those very productive years at Woods Hole?

DP: Yes, it was probably the most productive decade of my scientific life. I did well with the space agency, but the spinoff of being with him, the methods of doing research, the charisma of having been associated with him, all followed me and were very beneficial for me. I suppose if there is such a thing as the hereafter, I'd like to think that he's listening and smiling right now. When I think back on it, I often think that fate seemed to often step in at the right moment for me so that things could happen that made me the luckiest person that I could ever imagine to be.

When you grow up in a little town of 1200, 1201 actually—when I went off to war a buddy wrote to me and told me they crossed off the "1" and were buying German war bonds [laughter]—and I peddled newspapers for a dollar a week, and then I think of all the things that came about and how they happened, and it seems incredible. One person even mentioned to me that if I were a cat I'd be dead because they have nine lives and I've had more than that. I got blown up and was wounded in the war; I've crashed an airplane that I was actually the pilot of; been in a huge car crash pileup, on and on, and it just seems that there's some hand that's hovering over me.

AK: And Szent-Györgyi was a big part of that providential good luck.

DP: Oh yes, because you are bound to pick up, let's say habits, ways, methods, approaches, ways of looking at things that you know are the best ways to look at it in the long run. And early on I had made up my mind that to be successful I would never walk over anyone to be successful. And anytime I could put my hand out and help them I would, even if it meant taking longer to get where I was going. That didn't matter. I'm very grateful when I look back on that, I wonder how many other people are ever this lucky?

AK: Dr. Philpott, that is a nice note to end our interview on. Thank you very much for welcoming me to your home and for sharing all this information with me. . . .

[End of Interview]

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